

=> d his

(FILE 'HOME' ENTERED AT 11:27:31 ON 16 JAN 2008)
FILE 'CA' ENTERED AT 11:27:38 ON 16 JAN 2008
L1 17381 S (CAPTUR? OR TRAP? OR CONFIN?) (5A) (PARTICLE OR MICROPARTICLE OR
NANOPARTICLE OR BEAD OR MICROBEAD OR NANOBEAD OR MICROBALL OR
MICROSPHERE OR NANOBALL OR NANOSPHERE OR PARTICULATE OR
MICROPARTICULATE OR NANOPARTICULATE)
L2 395 S L1 AND(MICROFLUID? OR MICRO FLUID? OR MICROCHANNEL OR CAPILLARY
OR MICRO CHANNEL)
L3 152 S L2 AND(SEQUEN? OR FILTER? OR FLITRAT? OR RECIRC? OR OPTOFLUID? OR
NOZZLE OR ORIFICE OR WALLS OR FRIT OR DIAMETER OR POST)
L4 61 S L3 AND PY<2003
L5 19 S L3 AND PATENT/DT AND PY<2006
FILE 'BIOSIS' ENTERED AT 12:19:00 ON 16 JAN 2008
L6 24 S L4
FILE 'MEDLINE' ENTERED AT 12:19:19 ON 16 JAN 2008
L7 27 S L4
FILE 'CA, BIOSIS, MEDLINE' ENTERED AT 12:19:57 ON 16 JAN 2008
L8 92 DUP REM L4 L5 L6 L7 (39 DUPLICATES REMOVED)

=> d bib,ab 18 1-92

L8 ANSWER 8 OF 92 CA COPYRIGHT 2008 ACS on STN
AN 139:335050 CA
TI Method and the device for micro-particle array fabrication
IN Noda, Hideyuki; Kohara, Yoshinobu; Okano, Kazunori
PA Hitachi, Ltd., Japan
SO U.S. Pat. Appl. Publ., 28 pp.
PI US 2003198575 A1 20031023 US 2002-321589 20021218
PRAI JP 2002-117487 A 20020419
AB There are provided a novel method and technol. for arraying micro-
particles. Micro-**particle trapping capillaries** each having an inner
diam. smaller than the outer **diam.** of probe-immobilized micro-particles
are prepd. By vacuuming the inside of each micro-**particle trapping**
capillary, only one of the micro-particles is vacuumed onto/an opening
at the tip thereof and taken out from holders holding a plurality of the
micro-particles. The micro-particle vacuumed onto the opening at the
tip of each micro-**particle trapping capillary** is positioned at the
opening of the **capillary** or the edge of each channel provided in a chip,
the channels each having an inlet and an outlet with a slightly larger
width than the outer **diam.** of the micro-particle so as to allow passage
of only one micro-particle. The micro-particle vacuumed onto the
opening at the **capillary** tip is injected into the **capillary** from the
opening of the **capillary** or the channel edge of the chip.

L8 ANSWER 24 OF 92 CA COPYRIGHT 2008 ACS on STN
AN 135:354960 CA
TI **Microfluidic** devices
IN Andersson, Helen; Stemme, Goeran; Van Der Wijngaart, Wouter
PA Pyrosequencing AB, Swed.; Piesold, Alexander James
SO PCT Int. Appl., 33 pp.
PI WO 2001085341 A1 20011115 WO 2001-GB2119 20010514

PRAI SE 2000-1768 A 20000512

AB A **microfluidic** device for **trapping** nonmagnetic and magnetic **beads** is disclosed which device has an inlet, an outlet and a **bead trapping filter** wherein said **bead trapping filter** comprises a wall with slots wherein the openings of the slots is less than the **diam.** of the beads. The **filter** is provided in an enlarged zone and may extend around the flow axis - e.g. a box-like shape. The device may be used in a method of **sequencing-by-synthesis**.

L8 ANSWER 25 OF 92 CA COPYRIGHT 2008 ACS on STN

AN 135:278592 CA

TI Template-Assisted Self-Assembly: A Practical Route to Complex Aggregates of Monodispersed Colloids with Well-Defined Sizes, Shapes, and Structures

AU Yin, Yadong; Lu, Yu; Gates, Byron; Xia, Younan

CS Departments of Chemistry and Materials Science & Engineering, University of Washington, Seattle, WA, 98195-1700, USA

SO Journal of the American Chemical Society (**2001**), 123(36), 8718-8729

AB This paper describes a strategy that combines phys. templating and **capillary** forces to assemble monodispersed spherical colloids into uniform aggregates with well-controlled sizes, shapes, and structures. When an aq. dispersion of colloidal particles was allowed to dewet from a solid surface that had been patterned with appropriate relief structures, the **particles** were **trapped** by the recessed regions and assembled into aggregates whose structures were detd. by the geometric confinement provided by the templates. The authors demonstrated the capability and feasibility of this approach by assembling polystyrene beads and SiO₂ colloids (≥ 150 nm in **diam.**) into complex aggregates that include polygonal or polyhedral clusters, linear or zigzag chains, and circular rings. The authors also were able to generate hybrid aggregates in the shape of HF or H₂O mols. that are composed of polymer beads having different **diams.**, polymer beads labeled with different org. dyes, and a combination of polymeric and inorg. beads. These colloidal aggregates can serve as a useful model system to study the hydrodynamic and optical scattering properties of colloidal particles having nonspherical morphologies. They should also find use as the building blocks to generate hierarchically self-assembled systems that may exhibit interesting properties highly valuable to areas ranging from photonics to condensed matter physics.

L8 ANSWER 44 OF 92 CA COPYRIGHT 2008 ACS on STN

AN 132:82004 CA

TI Silicon nitride membranes for filtration and separation

AU Galambos, Paul; Zavadil, Kevin; Shul, Randy J.; Willison, Christi Lober; Miller, Samuel L.

CS Sandia National Labs., Albuquerque, NM, USA

SO Proceedings of SPIE-The International Society for Optical Engineering (**1999**), 3877(Microfluidic Devices and Systems II), 273-283

AB Semi-permeable silicon nitride membranes have been developed using a Bosch etch process followed by a reactive ion etch process. These membranes were obsd. to allow air but not water to pass through them into surface micromachined, silicon nitride **microfluidic** channels. Membranes with this property have potential use in **microfluidic** systems

as gas bubble **traps** and vents, **filters** to remove **particles** and gas partitioning membranes. Membrane permeation was measured as 1.6×10^{-8} mol/m².Pa s of helium for inline membranes at the entrance and exit of the silicon nitride **microfluidic** channels.

L8 ANSWER 49 OF 92 CA COPYRIGHT 2008 ACS on STN

AN 129:65080 CA

TI Efficient detection of single molecules eluting off an optically **trapped microsphere**

AU Machara, Nicholas P.; Goodwin, Peter M.; Enderlein, Jorg; Semin, David J.; Keller, Richard A.

CS Chemical Science and Technology Division, Los Alamos National Laboratory, Los Alamos, NM, 87545, USA

SO Bioimaging (1998), 6(1), 33-42

AB We demonstrate efficient detection of single fluorescent mols. eluting off a polystyrene **microsphere** optically **trapped** in a flowing sheath stream. A 1 μm **diam.** analyte doped microsphere was positioned $\sim 20 \mu\text{m}$ upstream of a 16 μm **diam.** probe laser without significant degrdn. of the detection signal-to-noise ratio due to scattered laser light and fluorescence from the microsphere. In comparison to more std. **capillary** sample introduction, the microsphere causes only small perturbations to the sheath fluid flow. The small **diam.** of the analyte stream eluting from the microsphere results in a greater than 90% detection efficiency for single rhodamine-6G mols., limited primarily by the photostability of the dye.

=> log y

STN INTERNATIONAL LOGOFF AT 12:23:46 ON 16 JAN 2008